Land Use Plan for the Springbank Off-stream Reservoir Project

Draft



FEBRUARY 2024

Land Use Plan for the Springbank Off-stream Reservoir Project | Environment and Protected Areas ©2024 Government of Alberta | Published: February 2024

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1.0 Introduction

The flood of 2013 was a devastating event both socially and economically for many people living in southern Alberta. It was the most significant flood on record in Alberta and had an estimated peak flow of 1,240 cubic metres per second. Statistically, it has been estimated to be slightly greater than a 1 in 200-year flood. The flood remains one of the costliest (CAD \$6 billion) natural disasters in Canadian history. The flood tragically resulted in five deaths and forced the evacuation of over 80,000 people (one of the largest evacuations in Canadian history).

Following the 2013 flood, the Government of Alberta (GoA) initiated a study to identify flood mitigation projects to reduce the risk of future floods including options for a reservoir along the Elbow River. The preferred option for the reservoir is approximately 15km west of Calgary, located within the Springbank community in Rocky View County.

The Springbank Off-stream Reservoir Project (the Project) is situated in the Treaty 7 area between Highway 1 and Highway 8, at the junction of Highway 22 and Springbank Road. The Project involves the diversion and detainment of Elbow River flood flows via a diversion channel into a dry reservoir. Outside of flood events, the reservoir will be dry and will not hold a permanent body of water, excluding the unnamed creek and existing wetlands within the reservoir area. The Project includes the following components as identified in Figure 1:

- Diversion infrastructure on the main channel and floodplain of the Elbow River to divert flood flows.
- Diversion channel to convey diverted floodwater into the dry reservoir.
- Dam structure and dry reservoir to detain the diverted floodwater.
- Gated low-level outlet works (LLOW) within the dam structure to help detain and control the release of diverted floodwaters back to the Elbow River after the flood subsides via an outlet channel that connects to the existing unnamed creek channel. Outside of flood operations the LLOW will remain open to convey unnamed creek flows uninhibited under the dam structure.

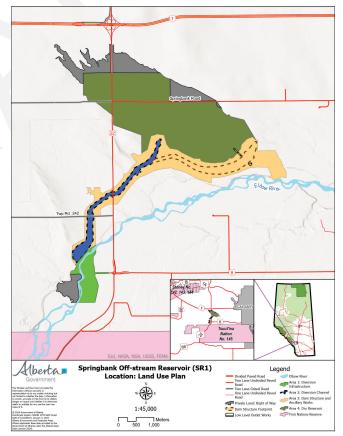


FIGURE 1: Land Use Plan Location

The Project has been engineered to work in tandem with the Glenmore Reservoir located within the City of Calgary to manage downstream water flows and reduce impacts of large flood events by temporarily holding water and reducing flows in the Elbow River.

Developing flood mitigation infrastructure is important to reduce risk and enhance safety for residents and property alike in the event of future flood scenarios. The Elbow River is an important river both in the past and current day by providing sustenance, supporting agricultural use, providing fish and wildlife habitat, and supporting downstream communities with drinking water and recreational opportunities. As land use and general settlement patterns have changed over time, major weather events such as flooding pose a threat to all who reside near the river and those who depend on the Elbow River for their water supply.

The Project lands are considered to be occupied Crown land. The primary and overriding use of the Project lands is for flood mitigation and site operations. Safety is paramount in any decisions that may allow for access onto the Project lands, including the safety of all government operational staff, agents, contractors, First Nations peoples, and the public using the site. Beyond the primary and overriding requirements for flood mitigation, site operations and safety, priority use and access of the Project lands will be for First Nations' exercise of treaty rights and traditional uses. Secondary uses and access to the Project lands will include non-motorized recreational activities for the public. Provisions regarding all of the uses and access will support safe operations of the infrastructure, and limit impacts on the environment and surrounding private landowners.

See Glossary of Acronyms and Terms.

1.1 First Nations' Perspectives

First Nations peoples have been guardians of the land since creation. Relationships with the land and water are vital for the survival of their cultures and languages. First Nations peoples recognize the significance of protecting the land for future generations. Deep connections to the land create knowledge from experiences expressed through daily life and ceremony. Indigenous land users observe the land: the rivers and streams, the weather, the plants, and the animals. First Nations peoples have innate first-hand intergenerational knowledge that is deeply connected to the land and is essential to culture-based monitoring and monitoring as a whole.

The Government of Alberta respects that the treaty rights of First Nations peoples are protected by section 35 of the *Constitution Act, 1982*, and understands the important role these rights have in maintaining First Nations' cultures and traditions. Further, nothing within this Land Use Plan (Plan) is intended to be interpreted to add to or take away from any existing rights recognized and affirmed by section 35 of the *Constitution Act, 1982*.

2.0 Purpose

This Land Use Plan for the Project describes a variety of access scenarios, suitable land uses, and related policy direction. The Plan reflects the primary intention for an overall reduction of flood risk to people and landscapes downstream and prioritizing the exercise of treaty rights and traditional uses after flood mitigation. Policies have been developed to be in alignment with regulatory approval conditions placed on the Project, applicable provincial legislation and associated regulation to ensure the Project is operationally functional and feasible.

2.1 Policy Directives

Unlike typical reservoirs, which permanently hold water, the Project consists of a dry reservoir that will detain water only during a flood event requiring the diversion of floodwaters from the Elbow River. The reservoir will be emptied as flood waters in the Elbow River subside. With the creation of new Crown lands, a unique opportunity is presented when considering how to approach land use planning to balance numerous competing uses on this Project. First Nations peoples have new opportunities to exercise treaty rights and traditional uses on these occupied Crown lands. Additionally, the Project lands will accommodate new opportunities for non-motorized recreation for the public. These are both added benefits to the primary purpose of flood mitigation along the Elbow River.

The Plan provides policy direction for the Project lands to ensure that the primary intention of the Project lands is for off-stream flood mitigation. These operational and land management policies provide direction related to access and use of the Project lands and support ongoing environmental monitoring to guide land management approaches and maintenance activities.

Policy direction has also been developed to ensure priority for First Nations' access to the Project lands outside of flood and recovery periods post flood to enable the exercise of treaty rights for hunting, trapping and fishing for food in addition to providing access for traditional uses including but not limited to ceremonies and gathering sites.

Additional policies provide direction for public access and use of the Project lands including common non-motorized, passive recreational activities such as walking, biking and nature appreciation, and direction regarding regulated activities such as hunting and use of firearms. Direction is also provided regarding potential activities occurring within the Project lands to ensure compatibility with operational requirements, promote public safety, and support First Nations' exercise of treaty rights and traditional uses.

Policy categories and supporting statements include:

- Policy Category 1: Flood Mitigation: Project Operations and Land Management
- Policy Category 2: First Nations' Access and Use of the Project Lands
- Policy Category 3: Public Access and Use of the Project Lands

2.2 Project Approval and Regulatory Conditions

The Project received regulatory approvals in 2021.

Alberta Transportation and Economic Corridors (TEC) was directed to advance site planning and construction activities and Alberta Environment and Protected Areas (EPA) was directed to begin development of the Plan.

2.3 Guiding Principles

Approval conditions provide legally binding direction for future land use and the land use planning process for the Project. With consideration of feedback received from First Nations peoples and stakeholders during the regulatory approval process, the *Updated Draft Guiding Principles and Direction for Future Land Use* (Appendix A: Updated Draft Guiding Principles and Direction for Future Land Use) was developed. The *Updated Draft Guiding Principles and Direction for Future Land Use* was used to guide the development of this Plan.

2.4 Project Land Ownership

The Project consists of Crown lands owned by the GoA, and privately held lands where the GoA has entered into utility right-of-way agreements that have been registered on the private land titles, to provide a flood mitigation function to support the effective operation of the Project. The Plan provides direction for use and access on the Project lands held as occupied Crown lands only and does not apply to lands outside of the Project lands.

2.5 Legislation and Regulation

The GoA intends to implement the Plan primarily under the *Water Act* and the *Public Lands Act* and associated regulations, with additional direction provided by the *Wildlife Act* and associated regulations.

In order to address the complex operational nature of the Project lands, the legislation and regulations listed in Table 1 will be used to manage current and future land uses. This will ensure clear direction for GoA operational groups responsible for managing all aspects of the Project.

| Legislation and Regulation | Key Direction | Relationship to Land Use Plan |
|--|---|--|
| The Public Lands Act (And Associated Regulations) | Provides for the use, management and classification of the public land base in the Province of Alberta. | Provides for the use and management and enforcement of public land located within the Project lands. |
| The Water Act (And Associated Regulations) | Supports and promotes the conservation and management of water in the Province of Alberta. | Includes provisions that allow the GoA by order to regulate land use of the Project lands. |
| The Wildlife Act (And Associated Regulations) | Establishes provisions for the protection and conservation of wildlife in the Province of Alberta. | Defines controls for wildlife management including hunting, within the Project lands. |

TABLE 1: Legislation and associated regulations applicable to the Project lands

2.6 Management and Operational Structure

The Project will be operated by Agriculture and Irrigation (AGI) supporting the primary use of the lands for flood mitigation in accordance with the *Water Act* and associated regulations. Components of land management of the dry reservoir may be undertaken through arrangements between AGI and Forestry and Parks (FP), and with EPA directed by both the *Water Act* and the *Public Lands Act* and associated regulations. This functional partnership ensures efficiency in operational delivery of land management activities within the Project lands. Additional components of the Plan will involve Indigenous Relations (IR) and the First Nations Land Use Implementation Committee).

2.7 Adaptive Management

Adaptive management is a system of management that allows accountability and flexibility to anticipate, prepare and respond to dynamic changes that may impact the Project lands. Possible conditions include flood events where the size and overall impact are variable and unpredictable. Adaptive management allows operators flexibility to respond and provide immediate attention and resources when and where required, and may result in adjustments in the policy direction over time to account for changing conditions and pressures. Adaptive management will be undertaken in consultation with appropriate government departments and with the First Nations Land Use Implementation Committee. Significant changes may also require additional community and public engagement.

3.0 Access Management

The Project is comprised of numerous components that function together as a complete off-stream flood management system with a primary function to manage extreme high water flow events. While it is not possible to predict the exact duration, dates or year of a flood occurrence, data analysis and modelling has helped inform when the typical annual flood season occurs.

Given the importance and sensitivity of the Project infrastructure, permanent restrictions on access to specific locations within the Project will be enforced. To reduce risk to users and operational staff and to accommodate operational activities, the Project will be subject to full or partial closures at the discretion of the GoA. These closures may affect different locations and features within the Project lands.

3.1 Restrictions: Access and Use

Recognizing that safety is at the forefront of successful operation and management of the Project lands, access to specific areas serving a critical operational function will be restricted and enforced year-round. These permanent restrictions will extend to all users, including First Nations peoples and the public, with access granted only to authorized individuals. Project restricted access locations (Figure 2) will have signs and notices to ensure accidental entry does not occur. Locations within the Project lands subject to restricted access include, but are not limited to, the following:

- Diversion Infrastructure: includes but is not limited to the diversion inlet and gates, service spillway, floodplain berm and auxiliary spillway, debris deflection barrier and control building.
- Diversion Channel: Includes full length from the Elbow River to the entry into the dry reservoir.
- LLOW: Includes all structural components within and extending north and south of the dam structure.

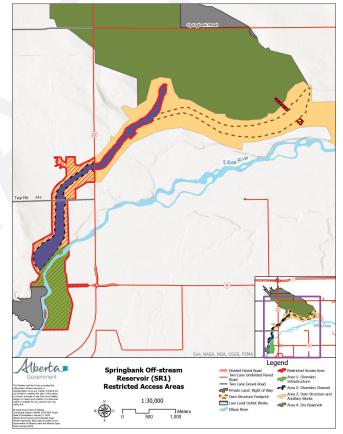


FIGURE 2: Restricted Access Areas

3.2 Restrictions: Closure Scenarios

Five closure scenarios have been developed with the intent to restrict general access during periods of increased risk to public safety, during operational activities, or to manage environmental sensitivities. Closures will increase responsiveness during emergency situations and will ensure safety for GoA operators and users alike. When the Project lands are in a state that can accommodate use and are considered safe by the GoA, re-entry will be allowed. Ultimately, the use of the following site closure scenarios ensures primary dam operations, land management and restoration activities can occur.

3.2.1 Closure Scenario #1: Post Construction

Dates in effect: 2025 – 2026 or as directed by the GoA.

Details: To enable land and vegetation to recover from initial construction, conduct required restoration of disturbed sites, and allow wildlife time to adjust to landscape changes, no unauthorized access will be granted for a minimum of two (2) growing seasons once construction has been completed. During this time, the GoA will actively manage and monitor the Project lands in accordance with the Vegetation and Wetland Mitigation, Monitoring and Revegetation Plan and adapt the closure as required.

During this closure period, ongoing monitoring and maintenance of the Project lands will be undertaken by GoA staff or authorized persons. The First Nations Land Use Implementation Committee will review associated annual monitoring and maintenance plan reports to assess the need to adjust or refine the plans for subsequent years.

Intended Outcome: This closure aligns with the desires of First Nations peoples to let the land rest to allow time for existing vegetation to regenerate and newly vegetated locations to become viable, and for wildlife movement patterns to adjust.

Area(s) where applicable: All Project lands, at the discretion of the GoA.

Closure applies to: All users, excluding authorized persons.

3.2.2 Closure Scenario #2: Annual Flood Season

Dates in effect: Annually, or as directed by the GoA.

Details: Various datasets, including recorded historic flood events impacting the watershed, indicate the typical flood season occurs between May 1 and July 31. This closure scenario will be imposed once the initial post construction closure period of minimum two growing seasons has been completed.

During this closure period, ongoing monitoring of the Project lands may be undertaken by GoA staff or authorized persons who will work with the First Nations Land Use Implementation Committee and will review associated annual monitoring and maintenance plan reports to assess the need to adjust or refine the plans for subsequent years.

Intended Outcome: To maintain safety during potential emergency operations resulting from a flood event. Operational requirements may require the reservoir to fill with flood waters with limited warning.

Area(s) where applicable: All Project lands, at the discretion of the GoA.

Closure applies to: All users, excluding authorized persons.

3.2.3 Closure Scenario #3: Emergency Event

Dates in effect: When an emergency event occurs outside of a planned closure.

Details: Unexpected events such as flooding or wildfires may activate an emergency response and bring the Project lands into full closure. Once a predetermined flood threshold is triggered, as agreed to by AGI,

the City of Calgary and the GoA's River Forecasting Center, an appropriate emergency response will be initiated and communicated. The Project lands will be closed to ensure unrestricted operations, restrict access and support a coordinated emergency management approach.

Intended Outcome: Consideration for re-opening will be evaluated on a case-by-case basis dependent upon the type and severity of the emergency event affecting the Project lands. Considerations will be made depending on the duration of response and the reclamation period required.

Area(s) where applicable: All Project lands, at the discretion of the GoA.

Closure applies to: All users, excluding authorized persons.

3.2.4 Closure Scenario #4: Reclamation Post Flood

Dates in effect: As directed by the GoA.

Details: Regardless of severity and duration of a flood event, alteration of the Project lands is anticipated. Site assessments post flood will determine the severity of the impact and identify an appropriate reclamation response.

Intended Outcome: Once reclamation efforts have been completed post flood, it is anticipated the Project lands will be closed for a minimum of two (2) growing seasons to promote vegetation establishment.

During this closure period, ongoing monitoring of the Project lands will be undertaken by GoA staff or authorized persons working with the First Nations Land Use Implementation Committee and will review associated annual monitoring and maintenance plan reports to assess the need to adjust or refine the plans for subsequent years.

Ongoing monitoring and assessment of the recovery process will occur to determine when the site can support access and use.

Area(s) where applicable: All Project lands, at the discretion of the GoA.

Closure applies to: All users, excluding authorized persons.

3.2.5 Closure Scenario #5: Maintenance and Discretionary Activities

Dates in effect: As directed by the GoA.

Details: GoA approved maintenance activities or other discretionary activities occurring within the Project lands may require closures of specific areas or of the entire Project lands. Due to the variation of closure scenarios, the actual duration and locations subject to the closure will be assessed by the GoA and communicated on a case-by-case basis.

During these closure periods, ongoing monitoring of the Project lands may be undertaken by GoA staff or authorized persons. The First Nations Land Use Implementation Committee will be informed of these closures with potential opportunities to support monitoring where compatible with operational requirements determined on a case-by-case basis.

Intended Outcome: This provision permits planned maintenance activities or other discretionary activities to be undertaken in a controlled and secure setting reducing risk to all parties.

Area(s) where applicable: All project lands. Specific location and duration of closure is at the discretion of the GoA.

Closure applies to: All users, excluding authorized persons.

3.3 Land Use Matrix

Identification of potential land uses offered an opportunity to recognize suitable activities occurring within the Project lands. Prior to construction, multiple land use assessments were conducted to identify factors including:

- overall land cover
- identification of important plants for First Nations' traditional uses
- historical resources
- riparian areas
- · documentation of previously altered (cultivated) land cover

Results of these formal assessments identified a variety of compatible land uses which may minimally impact the land.

The Project lands have been divided into four (4) distinct, yet inter-related land use areas where different activities support the primary use of off-stream flood mitigation, land management, First Nations' priority use and public secondary use. Four (4) land use areas (Figure 3), and related area access restrictions are described in this section. These land areas were assessed based upon current features and will require specific operational and land management oversight resulting from a flood event.

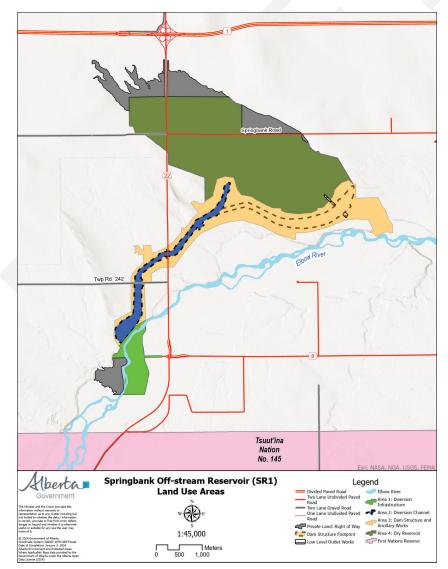


FIGURE 3: Land Use Areas

3.3.1 Area 1: Diversion Infrastructure (Figure 4)

Key infrastructure components: Includes, but is not limited to, the in-stream service spillway, floodplain berm and auxiliary spillway, diversion inlet gates, debris deflection barrier and control building.

Details: During flood events, the diversion infrastructure will divert flood water from the Elbow River to the dry reservoir. Following a flood event, the reservoir will be drained at a controlled rate into the Elbow River via the LLOW and outlet channel comprised of constructed and natural features. The listed infrastructure are all considered critical to the safe operations of the Project and unauthorized access to these areas is not permitted.

Dam Operational authority: The Water Act and applicable regulations.

Land Management authority: The Water Act and applicable regulations.

Access restriction: All users, excluding authorized persons.

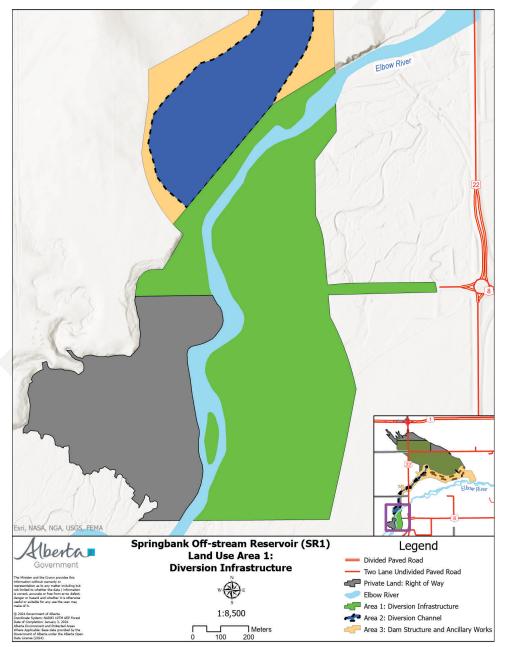


FIGURE 4: Land Use Area 1: Diversion Infrastructure

3.3.2 Area 2: Diversion Channel (Figure 5)

Key infrastructure component: An engineered and constructed channel connecting the diversion infrastructure to the dry reservoir.

Details: During flood events, flood water diverted from the Elbow River via the diversion infrastructure will flow through the diversion channel into the dry reservoir basin. During non-flood periods the channel may be used by wildlife as an underpass for safe passage across Highway 22.

Dam Operational authority: The Water Act and applicable regulations.

Land Management authority: The Water Act and applicable regulations.

Access restriction: All users, excluding authorized persons.

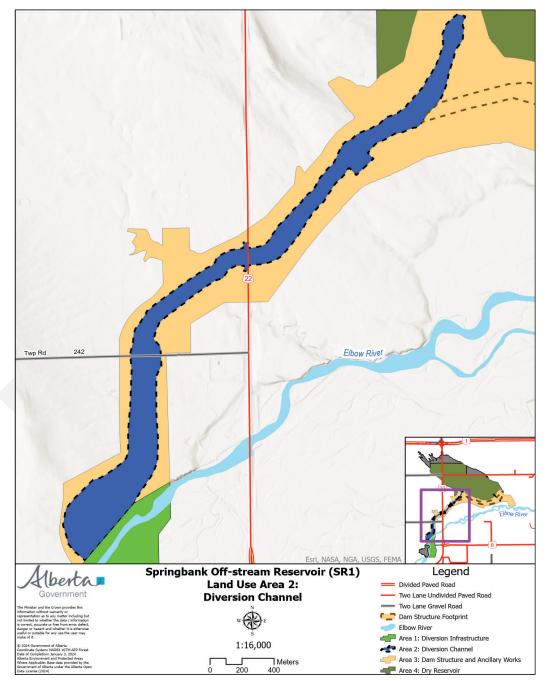


FIGURE 5: Land Use Area 2: Diversion Channel

3.3.3 Area 3: Dam Structure and Ancillary Works (Figure 6)

Key infrastructure components: A constructed earthen dam running generally in an east-west direction, north of the Elbow River and east of Highway 22. A gated LLOW within the dam structure to help detain and control the release of diverted floodwaters back to the Elbow River after the flood subsides via an outlet channel that connects to the existing unnamed creek channel. The earthen dam has maintenance roads along the crest and downstream toe of the dam, the two roads merge/split near the western extent of the dam. The maintenance road along the crest of the dam connects to Range Road 35 to the east, whereas the maintenance road along the toe of the dam dead-ends near the LLOW, both roads connect to Highway 22 at its intersection with Township Road 242 to the west.

Details: During flood events, the dam will detain diverted flood water until a controlled and monitored release back into the Elbow River via the LLOW and outlet channel once active flood conditions have passed.

Dam Operational authority: The Water Act and applicable regulations.

Land Management authority: The Water Act and applicable regulations.

Access restriction: Access permitted, outside of closure scenarios described in <u>3.2 Restrictions:</u> Closure Scenarios.

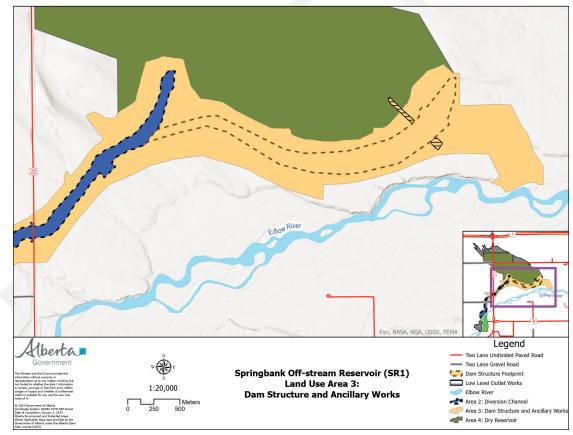


FIGURE 6: Land Use Area 3: Dam Structure and Ancillary Works

3.3.4 Area 4: Dry Reservoir (Figure 7)

Key infrastructure component: The dry reservoir is comprised of general vegetation ground cover consisting of a mixed variety of native and introduced grasses, forbs, shrubs and tree species. Some wetland areas have been identified within the dry reservoir and an unnamed intermittent creek runs through it.

Details: Typically dry and free from standing water, the dry reservoir relies on a combination of natural topography, the dam structure and the elevated roadbeds of Highway 22 and Springbank Road, to detain diverted water during a flood event.

Dam Operational authority: The Water Act, Public Lands Act and applicable regulations.

Land Management authority: The Public Lands Act, Water Act and applicable regulations.

Access restriction: Access permitted, outside of closure scenarios described in <u>3.2 Restrictions:</u> Closure Scenarios.

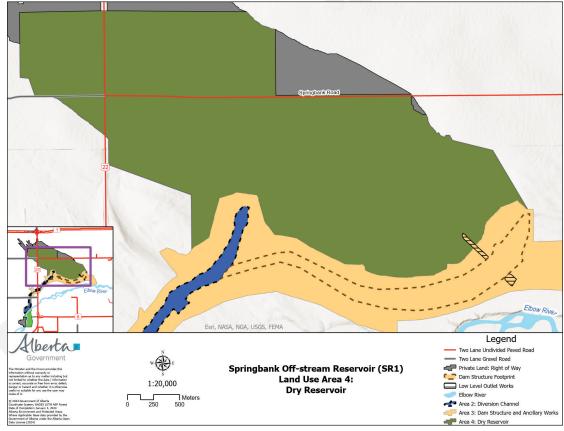


FIGURE 7: Land Use Area 4: Dry Reservoir

4.0 Land Use Plan Development

The Plan has been developed with meaningful consideration of input received from Indigenous communities and organizations, local municipalities, stakeholders, local landowners, and community groups through an iterative and collaborative process.

4.1 Participation in Land Use Planning

Two formal committees were formed, and representatives were invited to attend and participate in a variety of GoA-facilitated meetings where various materials were presented and discussed in working sessions.

4.1.1 First Nations Committee

A First Nations Committee was composed of representatives from First Nations. This committee provided input to the plan, recognizing that the Project lands will prioritize First Nations' access and use of the land to exercise treaty rights and for traditional use, outside of flood events, closures and recovery periods post flood. Consisting of representatives from Treaty 7 First Nations and Treaty 6 First Nations, the Committee shared varying perspectives and knowledge with the GoA, highlighting the importance of the Project lands within the natural environment and for the exercise of treaty rights and traditional uses.

4.1.2 Advisory Committee

The Advisory Committee was composed of Indigenous communities and organizations, local municipalities, recreation stakeholders, local community groups, local landowners and other interested stakeholders. Their work included providing advice and development of recommendations in support of public use and access including for recreation opportunities for consideration in the Plan.

5.0 Policy Category 1: Flood Mitigation: Project Operations and Land Management

The policy categories provide direction on use of the Project lands by ensuring applicable legislation and regulatory conditions will ultimately guide uses while balancing primary operational requirements for flood control purposes.

The primary use of the Project lands is to allow for a safe, managed response to future flood events affecting the Elbow River. The Project lands include:

- diversion infrastructure on the main channel and floodplain of the Elbow River
- a diversion channel to transport diverted floodwater into the dry reservoir
- an earthen dam to detain the diverted floodwater within the dry reservoir
- an emergency spillway
- a LLOW in the dam and outlet channel to return detained water back to the river after the flood subsides

It is expected that when the Diversion Infrastructure is not in use or not likely to be used, and access is deemed safe, the Project lands will support a variety of uses directed by this Plan. The Project lands are occupied Crown land, and temporary and permanent restrictions on use and access are required to manage the site for flood events, emergency situations and for user safety. Provisions in both the *Water Act* and the *Public Lands Act* give the GoA authority to restrict access and establish specific land use controls that ensure that dam operations and required land management activities are not negatively impacted by access and use. Several factors have been considered to maintain the operational use of the Project lands that also provides for priority access and use by First Nations peoples and secondary access and use by the public.

In an effort to strengthen relationships and understanding between the GoA and First Nations peoples, cultural sensitivity training with a focus on understanding First Nations' exercise of treaty rights and traditional uses within the Project lands will be provided to all GoA staff and authorized contractors working onsite.

5.1 Project Operations

The Project includes multiple engineered and constructed components which function together as an integrated system during flood events when river water is being diverted. The GoA is responsible for undertaking the routine monitoring and maintenance of all Project infrastructure in accordance with applicable regulations and legislation.

Policy 5.1.1 The GoA will actively manage all access and use of the Project lands to ensure primary operations for flood mitigation.

A significant flood event may impact the landscape of the reservoir area resulting in a need for site reclamation. Following a flood diversion event and subsequent draining of the reservoir, the impacted areas will be assessed and evaluated for potential reclamation needs. The Project lands will be closed to allow reclamation efforts to be completed post flood. As indicated in **3.2 Restrictions: Closure Scenarios** once initial reclamation activities have been completed, the Project lands will be subjected to continued closure for user safety and to allow impacted areas to stabilize allowing reseeded areas to establish and to execute required monitoring post flood.

Policy 5.1.2 The GoA will take reasonable steps to ensure the Project lands are safe and the landscape established so that use by First Nations peoples and the public can resume after any closure identified under Policy 5.1.1.

Throughout the development of this Plan, First Nations peoples have emphasized the importance of the land functioning as a teacher, which helps improve awareness of the surroundings and how to interact and approach the land with respect. For example, the importance of allowing time for the land to recover from construction was expressed. Recognizing the unavoidable disturbance to the land and the wildlife during construction, it was indicated there is a need for "letting the land rest" and "healing the land".

The method of restricting user access and use of the Project lands aids to support adjustment and adaptation of wildlife and their movement through the landscape. Further, closures give existing vegetation time to regenerate and newly seeded or planted locations an opportunity to become established. These closures also permit the GoA to address any locations or landscape features that may exhibit ecological conditions indicating notable stress, poor recovery, or reduced performance.

As detailed in <u>3.0 Access Management</u> the GoA manages all access and use of the Project lands.

Policy 5.1.3 The GoA can issue access and use restrictions or closure of the Project lands.

Policy 5.1.4 The GoA can revoke all permitted activities occurring within the Project lands if those permitted activities negatively impact normal operations.

Policy 5.1.5 The GoA will erect signage along the perimeter of the Project lands and at formal access locations informing of user expectations, awareness notifications and regulatory messaging.

5.2 Access for Maintenance and Other Operational Activities

The GoA will grant access for general maintenance activities and contractors that have been hired to provide services for the GoA in accordance with applicable regulation or legislation.

Policy 5.2.1 The GoA will provide access and use the lands to support GoA approved site operations, maintenance, or surveillance activities.

Policy 5.2.2 The GoA will enact closures of the entire Project lands or identified locations to support any GoA approved operations, maintenance, or surveillance activities.

5.3 Land Management

The GoA recognizes that the Project lands may be impacted and changed by periodic flood diversion events. Deposition of sediment and the establishment of invasive species resulting from a flood diversion event will influence future land management activities. Guided by a number of plans already approved, the GoA will implement a robust and responsive land management program working with the First Nations Land Use Implementation Committee to identify opportunities to support monitoring where compatible with operational requirements.

Policy 5.3.1 The GoA will conduct ongoing monitoring and reporting of the Project lands to support ongoing data collection to inform an effective land management program.

5.4 Vegetation Management

The GoA intends to maintain the integrity of grasslands within the reservoir by maintaining suitable ground cover, reducing threat of wildfire, and helping to reduce the establishment and spread of invasive species. Prior to Project approval, the Project lands were used for agricultural purposes such as grazing, haying and crop production (general agricultural use) and frequented by migrating wildlife such as elk and deer.

Through proven Crown land management practices, the risk of habitat damage within the Project lands can be minimized through restricting access to the lands during the annual closure scenario described in **3.2 Restrictions: Closure Scenarios**. Further, ongoing site monitoring can be used to inform decisions on suitability for issuing agricultural dispositions such as short-term grazing or haying permits. The Vegetation and Wetland Mitigation, Monitoring and Revegetation Plan provides detailed direction on how the Project lands will be managed and incorporates an adaptive management approach allowing for updates over time.

Annual vegetation management through issuance of mowing, haying or grazing permits may not be required throughout the Project lands; therefore, planned monitoring of the lands will direct an appropriate maintenance response. General direction to support responsible habitat and vegetation management, including the control of noxious weeds, will be enabled.

Policy 5.4.1 All vegetation management activities associated with the Project lands will be in accordance with control measures listed in the Vegetation and Wetland Mitigation, Monitoring and Revegetation Plan.

Policy 5.4.2 Pending assessment by rangeland agrologists, when favorable conditions are present, the GoA may issue short-term permits for mowing or haying as the preferred method, or livestock grazing, as land management tools.

Opportunities will be explored for the First Nations Land Use Implementation Committee to provide input on land management activities, such as consideration of how Traditional Ecological Knowledge (TEK) can be reflected in vegetation management practices.

Policy 5.4.3 The First Nations Land Use Implementation Committee will be invited to provide the GoA with input on appropriate traditional vegetation management approaches.

6.0 Policy Category 2: First Nations' Access and Use of the Project Lands

When the Project lands are not closed for flood mitigation or operational requirements, First Nations peoples will have priority use and access. The Plan addresses opportunities for First Nations peoples to exercise treaty rights and traditional uses.

6.1 Treaty Rights and Traditional Uses

The GoA is committed to working with First Nations peoples to ensure reasonable access to the Project lands to support the exercise of treaty rights and traditional uses where compatible with operational and safety requirements.

Where aligned with the primary operational intent of the Project as indicated in <u>5.0 Policy Category 1:</u> <u>Flood Mitigation: Project Operations and Land Management</u>, First Nations peoples will have access to use the land. They have also been encouraged to actively participate in opportunities to work with the GoA on ongoing vegetation management approaches as outlined in 5.4.3 above. Acknowledging the strong relationship to the land, First Nations' access to use the Project lands takes priority over public access and use described in <u>Policy Category 3: Public Access and Use of the Project Lands</u>.

Policy 6.1.1 Where compatible with GoA operational requirements, First Nations peoples will have access to use the Project lands for:

a) the exercise treaty rights including hunting, trapping and fishing for food, and

b) traditional uses such as gathering sites and historical or ceremonial locations.

Policy 6.1.2 The GoA will erect signage along the perimeter of the Project lands and at formal access locations indicating the potential presence of First Nations peoples exercising treaty rights, undertaking traditional uses and why these activities are occurring. GoA will work with the First Nations Land Use Implementation Committee on appropriate messaging for these signs.

6.2 First Nations Land Use Implementation Committee

The GoA is committed to ongoing collaboration with First Nations peoples through the establishment of a First Nations Land Use Implementation Committee. The First Nations Land Use Implementation Committee (committee name subject to change) will function for a period of not less than ten (10) years after the Project becomes operational and will then be evaluated for renewal. While active, this Committee may work with the GoA on a variety of initiatives including supporting vegetation and land management and monitoring activities and exploring educational opportunities involving the Project lands. Key elements informing the importance of the unique relationship between First Nations peoples and the land will be supported by the following policies:

Policy 6.2.1 First Nations will be invited to participate in a Land Use Implementation Committee in partnership with the GoA, to provide opportunities for First Nations peoples to remain connected with various ongoing land management activities occurring within the Project lands.

Policy 6.2.2 The GoA will continue to involve the First Nations Land Use Implementation Committee on matters involving land management, and access to use the Project lands for the exercise of treaty rights and traditional uses.

7.0 Policy Category 3: Public Access and Use of the Project Lands

Outside of flood events and site closures, the Project lands may provide opportunities for public access for limited year-round non-motorized recreational activities. Seasonal activities including hiking, walking, nature appreciation, hunting, snowshoeing, and bird watching are common activities that could be enjoyed within the Project lands. Through this Plan, the GoA will support use of the land by applying appropriate land access management tools such as legislation and associated regulations described below. The following policies are intended to be applied to public access and use and are not applicable to First Nations peoples.

7.1 Public Access

Access to certain locations within the Project lands may be limited or fully restricted for safety. Proposed future access locations into the Project lands are identified in <u>Appendix B: Springbank Off-stream</u> <u>Reservoir (SR1) Land Use Plan Policy Statement Map</u>.

Policy 7.1.1 Public access to the Project lands will be directed to identified locations. See <u>Appendix B:</u> Springbank Off-stream Reservoir (SR1) Land Use Plan Policy Statement Map.

7.2 Non-motorized Recreational Use

The use of motorized recreational vehicles is not a compatible use with other directed uses and will not be permitted within the Project lands. Where compatible with operational needs, low impact non-motorized recreation activities will be permitted as identified in this section. Additional restrictions may be required in the future to reduce user conflicts, support adaptive management and changing site conditions. Signage will be provided at all access points and at key locations within the Project lands to inform users of the restrictions.

The desire for opportunities to connect to the outdoors and nature continues to rise throughout the province. The Project lands provide an opportunity for regional connectivity between adjacent local communities and provide an option for cyclists and pedestrians to avoid some sections of local roads and highways. Non-motorized transportation through the Project lands will be enabled through use of a maintenance road servicing the Project infrastructure as directed by 7.2.2.

Policy 7.2.1 The use of motorized recreational vehicles and throttle-controlled bicycles (e.g., certain e-bike types) by the public will not be permitted within the Project lands.

Policy 7.2.2 The maintenance road may be used as an identified route for non-motorized recreational user access across the dam structure and a portion of the diversion channel outside of closure periods. See Appendix B: Springbank Off-stream Reservoir (SR1) Land Use Plan Policy Statement Map.

Policy 7.2.3 Where compatible with operations of the Project lands, the GoA will consider accommodations for Rocky View County to connect future approved regional active transportation alignments to GoA infrastructure.

Policy 7.2.4 Construction of permanent or temporary structures by the public will not be permitted within the Project lands.

Policy 7.2.5 The use of any watercraft by the public will not be permitted within the Project lands.

Although opportunities for extended day use activities within the Project lands have been expressed, the primary function of the Project lands is for flood mitigation. As such, consideration for overnight camping or future development of a formal campground will not be considered.

Policy 7.2.6 Overnight or random camping by the public within the Project lands will not be permitted.

Use of an open flame for campfires or other incendiary items such as, but not limited to heating, warming or cooking devices will not be permitted within the Project lands. Exemptions include use of open flame by GoA staff or authorized parties supporting dam operations or land management activities. The Project lands consist of tracts of grassland vegetation and various tree stands. Wildfire risk can be averted by providing users with education and through application and enforcement of user restrictions.

Policy 7.2.7 The use of open flame or incendiary devices by the public within the Project lands for non-GoA sanctioned dam operations or land management purposes will not be permitted.

7.3 Wildlife Conservation Activities

Recreational hunting is a key wildlife conservation tool. The Project lands are frequented by a variety of big game including deer, elk, and moose, and game birds such as geese and partridge. The province of Alberta regulates wildlife conservation through managing unique geographical areas known as a Wildlife Management Unit (WMU). The WMU's provide hunters with information regarding the hunting season, location and what species and type of animals are eligible. The Project lands currently span two WMU's:

- WMU 212 which permits archery (bow and arrow) big game hunting only during archery season and permits the use of primitive weapons only (bow and arrow, cross-bow, shotgun or muzzle loader) to special license holders,
- WMU 312 which permits the use of archery (archery only season) and weapons for general season (firearm, cross-bow or bow and arrow).

Users of the Project lands interested in hunting are required to consult the current recreational hunting regulations for appropriate dates and information. Hunting regulations do not impact Indigenous hunting activities.

To reduce risk and support safety for all users of the Project lands, the GoA will explore an amendment to the current Wildlife Management Unit boundaries. Initiating a WMU boundary adjustment to encompass the entire Project lands under WMU 212 intends to ensure that during the annual recreational hunting season, using archery or primitive weapons will only be permitted. The location of the proposed change to the current WMU boundary is identified in <u>Appendix B: Springbank Off-stream Reservoir (SR1) Land</u> <u>Use Plan Policy Statement Map</u>.

Policy 7.3.1 Future amendments to the current WMU boundaries to fully capture the Project lands within WMU 212 will be explored. Appendix B: Springbank Off-stream Reservoir (SR1) Land Use Plan Policy Statement Map.

The use of weapons for non-hunting purposes (e.g., shooting of targets or non-game species such as ground squirrels or coyotes) will not be permitted anywhere in the Project lands for the safety of operational staff, First Nations peoples and the public using the Project lands. As a mitigation measure, in alignment with <u>2.5</u>. Legislation and Regulation, the GoA will identify supporting tools for imposing the following restriction:

Policy 7.3.2 The recreational use of weapons for non-hunting activities by the public will not be permitted within the Project lands.

The Province of Alberta is divided into eight (8) fur management zones based on similar environmental features. Parties interested in trapping are required to obtain a Registered or Resident Fur Management License which enables a holder to trap animals within a Registered Fur Management Area described in the license. Due to a safety risk to those accessing these lands, the practice of trapping will not be permitted within the Project lands.

Policy 7.3.3 Regulated trapping by the public will not be permitted through the non-issuance of a Registered or Resident Fur Management Licenses specific to the Project lands.

After a flood event, conditions may result in standing water within the reservoir where fish may be present. The GoA must comply with strict regulations regarding the collection and removal of fish entrained within the Project lands. For conservation and user safety concerns, standing water (excluding local depressions or dugouts) will only be present during flood emergency events, where the entire planning area will be subject to full access restrictions. As such, angling is not permitted within the Project lands. The GoA will ensure that:

Policy 7.3.4 Sportfishing or fish harvesting by the public will not be permitted within the Project lands.

8.0 Performance Management

Performance management is the tracking and reporting on the Plan. This provides information for land managers, Indigenous communities and organizations, stakeholders, and the public, and information needed to review:

- implementation of the Plan
- achieving the policy direction of the Plan
- the need to adjust direction provided by the Plan

8.1 Plan Implementation

Tracking implementation of the Plan will provide information on status and highlight any areas requiring additional focus, resources, or adjustments. Information may include progress reports on the entire Plan, and other communications to address specific aspects of the Plan.

8.2 Performance Indicators

Performance indicators provide information needed to review how effective the Plan is at achieving the desired policies and if the Plan needs to be adjusted. This Plan works in conjunction with other Project plans, including:

- Air Quality Management Plan
- Archaeological and Heritage Management Plan
- Groundwater Monitoring Plan
- Health Rescue Plan
- Surface Water Monitoring Plan
- Vegetation and Wetland Mitigation, Monitoring and Revegetation Plan
- Wildlife Mitigation and Monitoring Plan

These listed plans will measure other aspects, such as environmental and vegetation conditions, in accordance with each of those plans' monitoring, review, and reporting strategies. This Plan will track and report on measures and indicators (TABLE 2: Land Use Plan Performance Indicators) related to access and outreach.

| TABLE 2. Land 030 Flair Fortonnanoc indicators | TABLE 2: | Land Use | e Plan | Performance | Indicators |
|--|----------|----------|--------|-------------|------------|
|--|----------|----------|--------|-------------|------------|

| Measure | Description | Indicators |
|--|---|---|
| First Nations Land Use Implementation Committee | Establish the First Nations Land Use Implementation Committee after finalization of the land use plan development process and work to ensure the Project lands continue to be managed to support operational and safety needs and provide for opportunities to exercise treaty rights and traditional uses. | 1. Governance documents are developed and updated as required. |
| | | 2. Two (2) meetings (min.) are held per year. |
| | | 3. The First Nations Land Use Implementation Committee is able to review information on the implementation of the Plan to assess i there are any needs to adjust or refine the Plan. |
| Education Strategy | Explore opportunities to develop an education strategy for the Project lands including identifying priorities, appropriate messaging, historical context, and implementation. | 1. Signage is installed along the perimeter of the Project lands and at formal access locations informing of user expectations, awareness notifications (potential presence of First Nations peoples exercising treaty rights and traditional uses), educational, safety and regulatory messaging. |
| | | Indigenous cultural sensitivity training is provided for staff. |
| | | Materials are developed such as a sto board that details the First Nations' exercise of treaty rights and traditional uses on these Project lands. |
| Public Access | Monitor compliance of public access with the policy direction in the Plan. | Compliance information is compiled, including education and enforcement activities. This could include information: |
| | | Number of educational engagemen with the public by enforcement staf |
| | | Number and type of warnings and infractions written |
| | | Number of complaints made by the public to the 310-LAND phone line |

8.3 Plan Review

Regular review cycles are important to ensure this Plan will benefit current and future generations of First Nations peoples and Albertans. These reviews are important, as the social and environmental context changes over time. As changes happen, it will be important to ensure the management approaches in the Plan continue to align with the Plan policies.

This Plan will be reviewed every ten (10) years from date of Plan approval. Engagement with First Nations peoples, stakeholders and the public will be an important part of this process and help to inform where adjustments may be required.

Plan reviews can also be initiated through ongoing evaluation of the Plan as described above. If the Plan is meeting the expected outcomes, no further action is required until the next scheduled review.

9.0 Glossary of Acronyms and Terms

Acronyms

| AGI | Ministry of Agriculture and Irrigation |
|------|---|
| EPA | Ministry of Environment and Protected Areas |
| FP | Ministry of Forestry and Parks |
| GoA | Government of Alberta |
| IR | Ministry of Indigenous Relations |
| LLOW | Low-level outlet works |
| LUA | Land use area |
| TEC | Ministry of Transportation and Economic Corridors |
| WMU | Wildlife Management Unit |
| | |

Definitions

For the purposes of this Plan, the following definitions apply:

| Term | Definition |
|--------------------------|---|
| Ancillary works | Includes but is not limited to access and maintenance roads, utilities, equipment staging areas for site remediation post flood, the low-level outlet works' outlet channel, and an operations building to support monitoring, maintenance and activities post flood. |
| Crown land | Means land titled to the His Majesty in Right of Alberta, including public lands under the <i>Public Lands Act</i> . |
| Detain | Means the temporary storage or impoundment of diverted Elbow River flood flows in the dry reservoir area. |
| Diversion channel | Includes a full length constructed channel from the Elbow River diversion infrastructure to the entry into the dry reservoir. |
| Diversion infrastructure | Includes but is not limited to the: diversion inlet and gates, service spillway, floodplain berm and auxiliary spillway, debris deflection barrier, and control building. |
| Dry reservoir | The area upstream of the dam structure that will detain diverted Elbow River flood waters up to the reservoir's full-service level elevation during flood events. |
| Discretionary activities | This includes any activity approved by the Government of Alberta that may occur within the Project lands, which could include, but is not limited to, First Nations' ceremonial practices and educational activities for First Nations youths. |
| First Nation | A band as defined in the Indian Act. |
| Flood season | Is determined by the GoA, and may be variable year-to-year, but typically coincides with annual spring runoff- May to July (inclusive), with peak flows typically occurring in June. |
| Fur Management Zone | A zone within Alberta based on similar environmental features which directs the trapping season timing and length. |
| Growing season | Means the portion of the year where local conditions promote vegetation growth. |
| Habitat | Means the sum of the environmental conditions in which an organism lives, or the physical and biological environment that provides essential food, water, and shelter for an organism. |

| Term | Definition |
|--------------------------------------|--|
| Land use | All uses of land, such as crops, forestry, conservation, recreation, tourism, oil and gas, mining, utility corridors, transportation, cities and towns, industrial development, etc. |
| Non-motorized recreation | Refers to recreational activities which do not rely on a motor for propulsion. |
| Plan | Means this Land Use Plan. |
| Primary use | Includes all uses that are compliant with the overriding requirements of the Project for flood mitigation, site operations and safety. |
| Priority use | Means access of the Project lands for First Nations' exercise of treaty rights and traditional uses. |
| Project | Means the Springbank Off-stream Reservoir Project. |
| Project lands | Project lands include all lands within the Project that are subject to this Plan including, b not limited to, the Crown land portion of the reservoir, dam, diversion infrastructure and diversion channel. |
| Reclamation | Means the process of reconverting disturbed land to its former use or other productive use (equivalent land capacity). |
| Registered Fur Management Area | A parcel of public land, the boundary of which is described on the original Registered Find Management License. |
| Registered Fur Management License | A license to hunt and trap fur-bearing animals on the lands described on the license, as well as on private lands that the license-holder owns or occupies. |
| Resident Fur Management License | A license available for trapping on privately owned and some public lands not included Registered Fur Management Areas. |
| Restoration post flood | The period of time required to restore the affected Project lands following a flood, as determined by EPA in their sole and unfettered discretion, and which may exceed one flood season and one (1) years' time. |
| Secondary Use | Includes non-motorized recreational activities for the public on the Project lands. |
| Traditional uses | Has the same meaning as in the GoA's policy regarding consultation with First Nations peoples on land and natural resource management. |
| Treaty rights | Constitutionally protected rights to hunt, trap, and fish for food. These rights may be exercised on unoccupied Crown lands or lands where First Nations peoples have a righ of access for such purposes. |
| Vegetation management | Includes all acceptable methods for managing vegetation within the Project lands as directed by the Springbank Off-stream Reservoir Project- Vegetation and Wetland Mitigation, Monitoring and Revegetation Plan (2022). |
| Wildlife Management Unit | The Province of Alberta is divided into a series of Wildlife Management Units (WMU), and wildlife within the boundaries of each WMU is managed by EPA according to the regulations under Alberta's <i>Wildlife Act</i> . |
| | |

Appendix A: Updated Draft Guiding Principles and Direction for Future Land Use

| Guiding Principle | |
|----------------------|--|
| # | Guiding Principle Direction |
| 1 | The primary and overarching use of the Crown land within the project footprint is for flood mitigation. No activities may limit or otherwise hinder the ability of the reservoir to fill to full supply level for the purpose of flood mitigation within the watershed. |
| 2 | The reservoir may fill at any point in the year without warning, including during periods below peak floods and may be inaccessible for an undetermined amount of time, post release, due to silt and debris buildup or other unintended consequences requiring monitoring and mitigation. |
| 3 | The Government of Alberta will take reasonable steps post flood, in compliance and consistent with the regulatory approvals for the Project, to ensure that the reservoir is safe so that secondary uses can resume. |
| 4 | Compensation will not be provided by the Crown for any impacts to land use activities resulting from operation of the Project infrastructure. |
| 5 | Safety is paramount in any decisions that allow for access onto the project lands. Restrictions on some or all land uses will be issued during specified periods of the year, as required, to reduce risks to safety and property from flooding. |
| 6 | There will be no access permitted on or across the Project infrastructure at any time or for any purpose (see Figure 4-05.1, dark pink areas). Project infrastructure includes the diversion structure on Elbow River, diversion channel, Off-stream dam, emergency spillway and outlet channel to the Elbow River. |
| 7 | Use of the lands by First Nations peoples will be a priority outside of flood and recovery periods post flood in order to enable the exercise of treaty rights and traditional uses, such as hunting. |
| 8 | Non-motorized recreational access (e.g. hiking, biking or cross-country skiing) will be permitted in some areas of the Land Use Area- LUA, in accordance with approved land uses. |
| 9 | Access for specific purposes such as grazing will be used as a tool to manage and maintain the grassland landscape in the LUA. |
| 10 | No non-flood related permanent or temporary infrastructure will be permitted in the reservoir. |
| 11 | The final Land Use Plan will be developed with meaningful consideration of input received from First Nations peoples. Alberta Environment and Protected Areas (formerly Environment and Parks) will work with First Nations peoples to develop a First Nations Land Use Implementation Committee to guide and facilitate the principles of the Land Use Plan and enable the exercise of treaty rights and traditional uses in the LUA. |
| 12 | Opportunities for meaningful participation by First Nations peoples and monitoring activities should be included in operations and management of the LUA. |

Appendix B: Springbank Off-stream Reservoir (SR1) Land Use Plan Policy Statement Map

